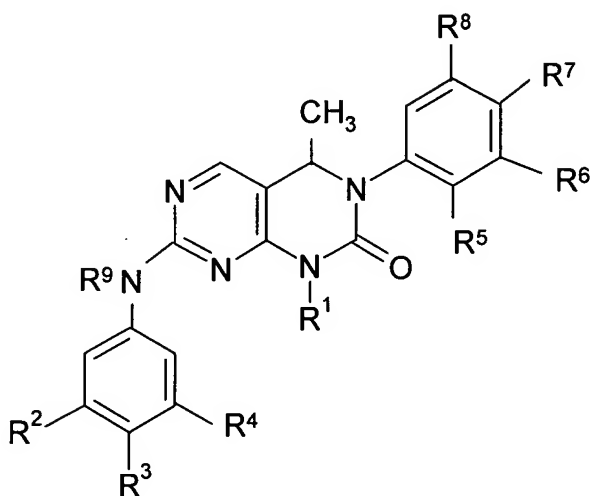


This listing of the claims will replace all prior versions and listings of the claims in this application.

**In the Claims:**

1. (Original) A compound of formula:



or a pharmaceutically acceptable salt thereof, wherein

R<sup>1</sup> is selected from the group

H,

C<sub>1-10</sub> alkyl,

C<sub>1-10</sub> alkyl substituted by up to three groups selected from aryl, cycloalkyl, heteroaryl, heterocycle, NR<sup>10</sup>R<sup>11</sup>, OR<sup>12</sup>, SR<sup>12</sup>, halogen, COR<sup>13</sup>, CO<sub>2</sub>R<sup>13</sup>, CONR<sup>13</sup>R<sup>14</sup>, SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, SOR<sup>13</sup>, SO<sub>2</sub>R<sup>13</sup>, CN and NO<sub>2</sub>, wherein the aryl, cycloalkyl, heteroaryl, and heterocycle groups may each independently be substituted by up to three groups selected from NR<sup>10</sup>R<sup>11</sup>, OR<sup>12</sup>, SR<sup>12</sup>, , halogen, COR<sup>13</sup>, CO<sub>2</sub>R<sup>13</sup>, CONR<sup>13</sup>R<sup>14</sup>, SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, SOR<sup>13</sup>, SO<sub>2</sub>R<sup>13</sup>, CN and NO<sub>2</sub>,

aryl,

aryl substituted by up to three groups selected from lower alkyl,  $\text{NR}^{10}\text{R}^{11}$ ,  $\text{OR}^{12}$ ,  $\text{SR}^{12}$ , , halogen,  $\text{COR}^{13}$ ,  $\text{CO}_2\text{R}^{13}$ ,  $\text{CONR}^{13}\text{R}^{14}$ ,  $\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ,  $\text{SOR}^{13}$ ,  $\text{SO}_2\text{R}^{13}$ , CN and  $\text{NO}_2$ ,

heteroaryl,

heteroaryl substituted by up to three groups selected from lower alkyl,  $\text{NR}^{10}\text{R}^{11}$ , ,  $\text{OR}^{12}$ ,  $\text{SR}^{12}$ , halogen,  $\text{COR}^{13}$ ,  $\text{CO}_2\text{R}^{13}$ ,  $\text{CONR}^{13}\text{R}^{14}$ ,  $\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ,  $\text{SOR}^{13}$ ,  $\text{SO}_2\text{R}^{13}$ , CN and  $\text{NO}_2$ ,

heterocycle,

heterocycle substituted by up to three groups selected from lower alkyl,  $\text{NR}^{10}\text{R}^{11}$ ,  $\text{OR}^{12}$ ,  $\text{SR}^{12}$ , halogen,  $\text{COR}^{13}$ ,  $\text{CO}_2\text{R}^{13}$ ,  $\text{CONR}^{13}\text{R}^{14}$ ,  $\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ,  $\text{SOR}^{13}$ ,  $\text{SO}_2\text{R}^{13}$ , CN and  $\text{NO}_2$ ,

$\text{C}_{3-10}$  cycloalkyl,

$\text{C}_{3-10}$  cycloalkyl substituted by up to three groups selected from lower alkyl  $\text{NR}^{10}\text{R}^{11}$ ,  $\text{OR}^{12}$ ,  $\text{SR}^{12}$ , halogen,  $\text{COR}^{13}$ ,  $\text{CO}_2\text{R}^{13}$ ,  $\text{CONR}^{13}\text{R}^{14}$ ,  $\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ,  $\text{SOR}^{13}$ ,  $\text{SO}_2\text{R}^{13}$ , CN and  $\text{NO}_2$ ,

$\text{C}_{2-10}$  alkenyl,

$\text{C}_{2-10}$  alkenyl substituted by up to three groups selected from  $\text{NR}^{10}\text{R}^{11}$ ,  $\text{OR}^{12}$ ,  $\text{SR}^{12}$ , halogen,  $\text{COR}^{13}$ ,  $\text{CO}_2\text{R}^{13}$ ,  $\text{CONR}^{13}\text{R}^{14}$ ,  $\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ,  $\text{SOR}^{13}$ ,  $\text{SO}_2\text{R}^{13}$ , CN and  $\text{NO}_2$ , and

$\text{C}_{2-10}$  alkynyl, substituted by up to three groups selected from  $\text{NR}^{10}\text{R}^{11}$ ,  $\text{OR}^{12}$ ,  $\text{SR}^{12}$ , halogen,  $\text{COR}^{13}$ ,  $\text{CO}_2\text{R}^{13}$ ,  $\text{CONR}^{13}\text{R}^{14}$ ,  $\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ,  $\text{SOR}^{13}$ ,  $\text{SO}_2\text{R}^{13}$ , CN and  $\text{NO}_2$ ;

$\text{R}^2$ ,  $\text{R}^3$  and  $\text{R}^4$  are independently selected from the group consisting of

H,

$\text{NR}^{10}\text{R}^{11}$ ,

$\text{OR}^{12}$ ,

$\text{SR}^{12}$ ,

$\text{C}_{1-10}$  alkyl,

C<sub>1-10</sub> alkyl substituted by up to three groups selected from cycloalkyl, heteroaryl, heterocycle, NR<sup>10</sup>R<sup>11</sup>, OR<sup>12</sup>, SR<sup>12</sup>, halogen, COR<sup>13</sup>, CO<sub>2</sub>R<sup>13</sup>, CONR<sup>13</sup>R<sup>14</sup>, SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, SOR<sup>13</sup>, SO<sub>2</sub>R<sup>13</sup>, CN and NO<sub>2</sub>; and wherein the cycloalkyl, heteroaryl, and heterocycle groups may each independently be substituted by up to three groups selected from lower alkyl, NR<sup>10</sup>R<sup>11</sup>, OR<sup>12</sup>, SR<sup>12</sup>, halogen, COR<sup>13</sup>, CO<sub>2</sub>R<sup>13</sup>, CONR<sup>13</sup>R<sup>14</sup>, SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, SOR<sup>13</sup>, SO<sub>2</sub>R<sup>13</sup>, CN and NO<sub>2</sub>,

heteroaryl, heteroaryl substituted by up to three groups selected from lower alkyl, NR<sup>10</sup>R<sup>11</sup>, OR<sup>12</sup>, SR<sup>12</sup>, halogen, COR<sup>13</sup>, CO<sub>2</sub>R<sup>13</sup>, CONR<sup>13</sup>R<sup>14</sup>, SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, SOR<sup>13</sup>, SO<sub>2</sub>R<sup>13</sup>, CN and NO<sub>2</sub>,

heterocycle, substituted by up to three groups selected from lower alkyl, NR<sup>10</sup>R<sup>11</sup>, OR<sup>12</sup>, SR<sup>12</sup>, halogen, COR<sup>13</sup>, CO<sub>2</sub>R<sup>13</sup>, CONR<sup>13</sup>R<sup>14</sup>, SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, SOR<sup>13</sup>, SO<sub>2</sub>R<sup>13</sup>, CN and NO<sub>2</sub>,

C<sub>3-10</sub> cycloalkyl,

C<sub>3-10</sub> cycloalkyl substituted by up to three groups selected from lower alkyl, NR<sup>10</sup>R<sup>11</sup>, OR<sup>12</sup>, SR<sup>12</sup>, halogen, COR<sup>13</sup>, CO<sub>2</sub>R<sup>13</sup>, CONR<sup>13</sup>R<sup>14</sup>, SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, SOR<sup>13</sup>, SO<sub>2</sub>R<sup>13</sup>, CN and NO<sub>2</sub>,

C<sub>2-10</sub> alkenyl,

C<sub>2-10</sub> alkenyl substituted by up to three groups selected from NR<sup>10</sup>R<sup>11</sup>, OR<sup>12</sup>, SR<sup>12</sup>, halogen, COR<sup>13</sup>, CO<sub>2</sub>R<sup>13</sup>, CONR<sup>13</sup>R<sup>14</sup>, SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, SOR<sup>13</sup>, SO<sub>2</sub>R<sup>13</sup>, CN and NO<sub>2</sub>,

C<sub>2-10</sub> alkynyl, and

C<sub>2-10</sub> alkynyl substituted by up to three groups selected from NR<sup>10</sup>R<sup>11</sup>, OR<sup>12</sup>, SR<sup>12</sup>, halogen, COR<sup>13</sup>, CO<sub>2</sub>R<sup>13</sup>, CONR<sup>13</sup>R<sup>14</sup>, SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>, SOR<sup>13</sup>, SO<sub>2</sub>R<sup>13</sup>, CN and NO<sub>2</sub>,

Provided that at least one of R<sup>2</sup>, R<sup>3</sup> or R<sup>4</sup> is not H.

R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> are independently selected from the group

H,

lower alkyl,

lower alkyl substituted by hydroxy or alkoxy,

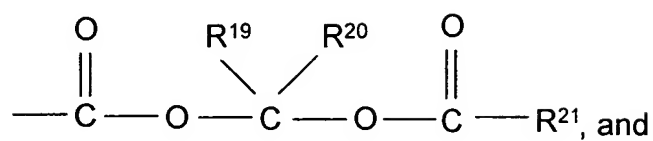
NR<sup>15</sup>R<sup>16</sup>,

OH,

OR<sup>17</sup>,  
SR<sup>17</sup>,  
halogen,  
COR<sup>17</sup>,  
CO<sub>2</sub>R<sup>17</sup>,  
CONR<sup>17</sup>R<sup>18</sup>,  
SO<sub>2</sub>NR<sup>17</sup>R<sup>18</sup>,  
SOR<sup>17</sup>,  
SO<sub>2</sub>R<sup>17</sup>, and  
CN;

R<sup>9</sup> is selected from the group

H,



COR<sup>17</sup>;

R<sup>10</sup> and R<sup>11</sup> are independently selected from the group

H,  
COR<sup>13</sup>,  
CO<sub>2</sub>R<sup>13</sup>,  
CONR<sup>13</sup>R<sup>14</sup>,  
SO<sub>2</sub>R<sup>13</sup>,  
SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>,  
lower alkyl,  
lower alkyl substituted by hydroxy, alkoxy or NR<sup>15</sup>R<sup>16</sup>,  
cycloalkyl,

cycloalkyl substituted by hydroxy, alkoxy, lower alkyl, or  $\text{NR}^{15}\text{R}^{16}$ ,  
heterocycle, and  
heterocycle substituted by hydroxy, alkoxy, lower alkyl, or  $\text{NR}^{15}\text{R}^{16}$ ,

or, alternatively,  $\text{NR}^{10}\text{R}^{11}$  can form a ring having 3 to 7 atoms, said ring optionally including one or more additional hetero atoms and being optionally substituted by the group consisting of one or more lower alkyl,  $\text{OR}^{12}$ ,  $\text{COR}^{13}$ ,  $\text{CO}_2\text{R}^{13}$ ,  $\text{CONR}^{13}\text{R}^{14}$ ,  $\text{SOR}^{13}$ ,  $\text{SO}_2\text{R}^{13}$ , and  $\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ;

$\text{R}^{12}$  is selected from the group

H,  
lower alkyl,  
 $\text{COR}^{13}$ ,  
 $\text{CONR}^{13}\text{R}^{14}$ ,  
 $\text{C}_{2-6}$  alkyl substituted by hydroxy, alkoxy, or  $\text{NR}^{15}\text{R}^{16}$ , cycloalkyl,  
cycloalkyl substituted by hydroxy, alkoxy, lower alkyl, or  $\text{NR}^{15}\text{R}^{16}$ ,  
heterocycle, and  
heterocycle substituted by hydroxy, alkoxy, lower alkyl, or  $\text{NR}^{15}\text{R}^{16}$ ;

$\text{R}^{13}$  and  $\text{R}^{14}$  are independently selected from the group

H,  
lower alkyl,  
 $\text{C}_{2-6}$  alkyl substituted by hydroxy, alkoxy, or  $\text{NR}^{15}\text{R}^{16}$ ,  
cycloalkyl,  
cycloalkyl substituted by hydroxy, alkoxy, lower alkyl, or  $\text{NR}^{15}\text{R}^{16}$ ,  
heterocycle, and  
heterocycle substituted by hydroxy, alkoxy, lower alkyl, or  $\text{NR}^{15}\text{R}^{16}$ ,

or, alternatively,  $\text{NR}^{13}\text{R}^{14}$  can form a ring having 3 to 7 atoms, said ring optionally including one or more additional hetero atoms and being optionally

substituted by the group consisting of one or more lower alkyl, OR<sup>17</sup>, COR<sup>17</sup>, CO<sub>2</sub>R<sup>17</sup>, CONR<sup>17</sup>R<sup>18</sup>, SO<sub>2</sub>R<sup>17</sup>, and SO<sub>2</sub>NR<sup>17</sup>R<sup>18</sup>;

R<sup>15</sup> is selected from the group

H,  
lower alkyl,  
COR<sup>17</sup>, and  
CO<sub>2</sub>R<sup>17</sup>; and

R<sup>16</sup>, R<sup>17</sup> and R<sup>18</sup> are independently selected from the group

H, and  
lower alkyl,

or, alternatively, NR<sup>15</sup>R<sup>16</sup> and NR<sup>17</sup>R<sup>18</sup> can each independently form a ring having 3 to 7 atoms, said ring optionally including one or more additional hetero atoms;

R<sup>19</sup> and R<sup>20</sup> are independently selected from the group

H, and  
lower alkyl; and

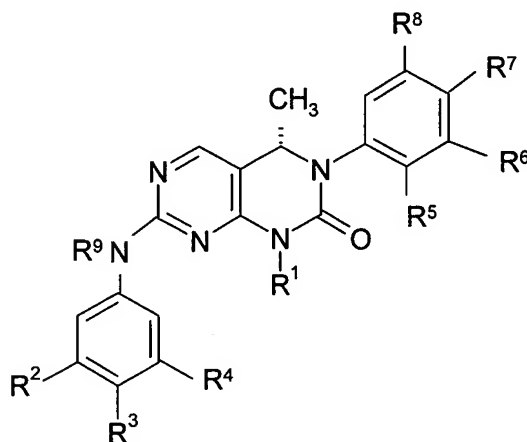
R<sup>21</sup> is selected from

lower alkyl, and  
C<sub>2-6</sub> alkyl substituted by hydroxy, alkoxy or NR<sup>15</sup>R<sup>16</sup>,

or a pharmaceutically acceptable salt thereof.

2. (Original) The compound of claim 1 wherein R<sup>1</sup> is selected from aryl and aryl substituted by CN and CONR<sup>13</sup>R<sup>14</sup>.

3. (Original) The compound of claim 1 wherein  $R^1$  is selected from lower alkyl.
4. (Original) The compound of claim 2 wherein  $R^2$  is  $C_{1-10}$  alkyl substituted by  $OR^{12}$  or  $NR^{10}R^{11}$ .
5. (Original) The compound of claim 3 wherein  $R^2$  is  $OR^{12}$ .
6. (Original) The compound of claim 1 wherein  $R^3$  is H.
7. (Original) The compound of claim 1 wherein  $R^3$  and  $R^4$  are H.
8. (Original) The compound of claim 1 wherein  $R^4$  is  $C_{1-10}$  alkyl substituted by  $NR^{10}R^{11}$ .
9. (Original) The compound of claim 1 wherein  $R^5$  is halogen.
10. (Original) The compound of claim 1 having the formula



**1a.**

11. (Original) A compound selected from the group:

(±)-3-[7-[3-(2-Hydroxy-ethyl)-phenylamino]-3-(4-methoxy-phenyl)-4-methyl-2-oxo-3,4-dihydro-2H-pyrimido[4,5-d]pyrimidin-1-yl]-benzonitrile ;

(±)-3-[7-[3-(2-Diethylamino-ethyl)-phenylamino]-3-(4-methoxy-phenyl)-4-methyl-2-oxo-3,4-dihydro-2H-pyrimido[4,5-d]pyrimidin-1-yl]-benzonitrile ; and

(±)-3-[7-[3-(2-Dimethylamino-ethyl)-phenylamino]-3-(4-methoxy-phenyl)-4-methyl-2-oxo-3,4-dihydro-2H-pyrimido[4,5-d]pyrimidin-1-yl]-benzonitrile .

12. (Original) A compound selected from the group:

(±)-3-(3-(4-Methoxy-phenyl)-4-methyl-7-{3-[2-(4-methyl-piperazin-1-yl)-ethyl]-phenylamino}-2-oxo-3,4-dihydro-2H-pyrimido[4,5-d]pyrimidin-1-yl)-benzonitrile ;

(±)-3-[7-[3-(2-Diethylamino-ethyl)-phenylamino]-3-(4-methoxy-phenyl)-4-methyl-2-oxo-3,4-dihydro-2H-pyrimido[4,5-d]pyrimidin-1-yl]-benzamide ;

(±)-3-[7-[3-(2-Dimethylamino-ethyl)-phenylamino]-3-(4-methoxy-phenyl)-4-methyl-2-oxo-3,4-dihydro-2H-pyrimido[4,5-d]pyrimidin-1-yl]-benzamide ; and



(±)-3-(3-(4-Methoxy-phenyl)-4-methyl-7-{3-[2-(4-methyl-piperazin-1-yl)-ethyl]-phenylamino}-2-oxo-3,4-dihydro-2H-pyrimido[4,5-d]pyrimidin-1-yl)-benzamide .

13. (Original) The compound

(+)-3-(2-Bromo-phenyl)-7-[4-(2-diethylamino-ethoxy)-phenylamino]-1,4-dimethyl-3,4-dihydro-1H-pyrimido[4,5-d]pyrimidin-2-one.

14. (Original) The compound

(-)-3-(2-Bromo-phenyl)-7-[4-(2-diethylamino-ethoxy)-phenylamino]-1,4-dimethyl-3,4-dihydro-1H-pyrimido[4,5-d]pyrimidin-2-one.

15. (Original) The compound

(±)-3-(2-Bromo-phenyl)-7-[4-(2-diethylamino-ethoxy)-phenylamino]-1,4-dimethyl-3,4-dihydro-1H-pyrimido[4,5-d]pyrimidin-2-one.

16. (Previously amended) A composition comprising a therapeutically effective amount of a compound of claim 1 and pharmaceutically acceptable carrier or excipient.

17. (Currently amended) A method for treating breast or colon cancer comprising the administration of a therapeutically effective ~~amount~~ amount of a compound of claim 1.

Claims 18 - 20. (Canceled)

21. (Original) A compound selected from the group:

(±)-Acetic acid 2-{3-[8-(3-cyano-phenyl)-6-(4-methoxy-phenyl)-5-methyl-7-oxo-5,6,7,8-tetrahydro-pyrimido[4,5-d]pyrimidin-2-ylamino]-phenyl}-ethyl ester and

(±)-Methanesulfonic acid (2-{3-[8-(3-cyano-phenyl)-6-(4-methoxy-phenyl)-5-methyl-7-oxo-5,6,7,8-tetrahydro-pyrimido[4,5-d]pyrimidin-2-ylamino]-phenyl}-ethyl)-ester,